

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 151 (NORTH POINT BLVD) AND SPARROWS POINT ROAD IN BALTIMORE COUNTY, MARYLAND. MD 151 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 151 APPROACHES OPERATING CONCURRENTLY AND THE SPARROWS POINT ROAD/ BUSINESS CENTER ENTRANCE OPERATING SPLIT.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND AND SOUTHBOUND MD 151 APPROACHES.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH ONE (1) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, VIDEO INTERFACE EQUIPMENT (1-8 CAMERAS) AND INTERSECTION MONITOR WITH BATTERY BACKUP FOR PHONE DROP AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "S" BASE MOUNTED CABINET.

PHONE DROP

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT.
ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK)	STANDARD NO. MD-104.02-13 (INTERSECTION FLAGGING OPERATION)
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE)	STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)	STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. ERIN KUHN ASSISTANT DISTRICT ENGINEER - TRAFFIC PHONE: (410) 229-2381	MR. MIKE PASQUARIELLO DISTRICT UTILITY ENGINEER PHONE: (410) 229-2341
MR. ANDRE FUTRELL ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (410) 229-2361	MS. CORREN JOHNSON CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630

<u>EQUIPMENT LIST "A"</u>		
A. EQUIPMENT TO BE SUPPLIED BY THE SHA		
<u>ITEM NO.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
9104	1 EACH	CONTROLLER CABINET, SIZE "S" WITH CONTROLLER, VIDEO INTERFACE EQUIPMENT (1-8 CAMERAS).
9118	1 EACH	4 CHANNEL DETECTOR AMPLIFIER
9570	9 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (GROUND MOUNT) : - 1 EACH M3-1 SIGN (24 IN. x 12 IN.) - GROUND MOUNT - 1 EACH M1-5 SIGN (30 IN. x 24 IN.) - GROUND MOUNT - 1 EACH M6-1 SIGN (21 IN. x 15 IN.) - GROUND MOUNT
9571	120 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF (POLE MOUNT) : - 1 EACH R3-5(L) (30 IN. x 36 IN.) - MAST ARM MOUNT - 1 EACH R3-6(1) (30 IN. x 30 IN.) - MAST ARM MOUNT - 1 EACH D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT - 2 EACH D-3(1) SIGN (VARIABLE x 16 IN.) - MAST ARM MOUNT - 2 EACH D-3(1) SIGN (VARIABLE x 32 IN.) - POLE MOUNT - 1 EACH M1-5(6) SIGN (48 IN. x 72 IN.) - POLE MOUNT

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

<u>EQUIPMENT LIST "B"</u>		
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR		
<u>ITEM NO.</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1001	3 EACH	MAINTENANCE OF TRAFFIC
2002	4 C.Y.	TEST PIT EXCAVATION
5002	80 L.F.	5" HEAT APPLIED WHITE OR YELLOW PERMANENT PAVEMENT MARKINGS
5003	70 L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS
5005	50 L.F.	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6001	50 L.F.	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
8001	44 EACH	12 INCH LED SIGNAL HEAD SECTION
8012	1 EACH	EMBEDDED METERED SERVICE PEDESTAL
8014	1 EACH	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE)
8020	1 EACH	MAST ARM POLE & 60 FT MAST ARM ANY 'T' DIMENSION
8021	1 EACH	MAST ARM POLE & 70 FT MAST ARM ANY 'T' DIMENSION
8023	4 EACH	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8024	1 EACH	REMOVE & DISPOSE MATERIAL & EQUIPMENT (PER ASSIGNMENT)
8029	4 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8038	165 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8039	185 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8040	765 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8041	17 L.F.	WOOD SIGN SUPPORTS UP TO 4' X 6'
8042	129 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8044	225 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	80 L.F.	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG - THHN/THWN
8048	11 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8053	3 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8057	95 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8058	1145 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8064	370 L.F.	ELECTRICAL CABLE - 3-CONDUCTOR NO. 12 AWG (B.W.G) TYPE T/C
8065	2 EACH	FURNISH AND INSTALL LED LUMINAIRES AND LAMPS

WIRING DIAGRAM

WIRING KEY

<p>A B C D E F Y</p> <p>7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)</p>	<p>Q R S T</p> <p>MICROLOOP PROBE LEAD-IN</p>
<p>G H J K</p> <p>5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)</p>	<p>U</p> <p>STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)</p>
<p>L Z</p> <p>3-CONDUCTOR ELECTRICAL CABLE NO. 12 AWG (B,W,G) TYPE T/C</p>	<p>V W X</p> <p>1-CONDUCTOR ELECTRICAL CABLE (NO. 8 A.W.G.)</p>
<p>M N O P</p> <p>VIDEO CAMERA DETECTION LEAD-IN CABLE</p>	<p>ML - MICROLOOP PROBE SET</p> <p>PE - PROPOSED UNDERGROUND ELECTRICAL SERVICE</p> <p>PT - PROPOSED UNDERGROUND TELEPHONE SERVICE</p> <p>+ - 3/4 IN. X 10 FT. GROUND ROD</p>

PHASE CHART

1

2

3

4

5

6


7

8

9

10

PHASE 1 + 5			R			R	R	R	R	R	
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6										
PHASE 1 + 6			G	R	R	R	R	R	R	R	
1 + 6 CHANGE			G	R	R	R	R	R	R	R	
PHASE 2 + 5	R	R	R			G	R	R	R	R	
2 + 5 CHANGE	R	R	R			G	R	R	R	R	
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	
PHASE 3	Y	R	R	R	R	R		G	R	R	
3 CHANGE	R	R	R	R	R	R	Y	Y	R	R	
PHASE 4	R	R	R	R	R	R	R		G	G	
4 CHANGE	R	R	R	R	R	R	R	Y	Y	Y	
FLASHING OPERATION			FLY			FLY	FLR	FLR	FLR	FLR	

	STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION		
	OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION		
	MD 151 (North Point Blvd) and Sparrows Point Road		
	Dundalk, MD		
GENERAL INFORMATION SHEET			
SCALE <u>NONE</u> ADVERTISED DATE <u>3/19/2013</u> CONTRACT NO. <u>XY1255185</u>			
DESIGNED BY <u>S. Bloss</u>		COUNTY <u>Baltimore</u>	
DRAWN BY <u>S. Bloss</u>		LOGMILE _____	
CHECKED BY <u>N. Leary</u>		TIMS NO. <u>L799</u>	
F.A.P. NO. _____		TOD NO. _____	
TS NO. 659 B	DRAWING TSP-3	OF 3	SHEET NO. 3 OF 3

PLOTTED: March 19, 2013
FILE: N:\31689-250\CADD\pSG-N003 SparrowsPcInl.dwg

BY: sbloss